

ABSTRACT

[0080] Disclosed are systems, methods, and an apparatus that includes a microstrip network disposed on a ground plane and including at least one collection point, where the collection point(s) is in electrical communication with the microstrip network, a probe associated with each collection point, the probe extending through at least one opening in the ground plane and in electrical communication with one or more transmission line(s), and, a physical perturbation associated with each probe, the physical perturbation integrated with the transmission line(s) to create at least a first and a second signal port in the transmission line(s).